

INTRODUCTION

Federal law requires that property acquired under the Hazard Mitigation Grant Program (HMGP) must be *forever dedicated and maintained as open space*. Consequently, the only structures your community may build on that property are those that are compatible with open space uses, such as:

- ❑ Structures opened on all sides (e.g., picnic shelters, kiosks, and refreshment stands)
- ❑ Public restrooms

The Regional Director of the Federal Emergency Management Agency (FEMA) must approve *any* other structure in writing *before* construction begins. The Regional Director will *only* consider structures compatible with open space uses. *All* structures, whether or not approval is required, must be wet floodproofed.

CONTENTS OF THIS PHASE

Phase IV — Open Space Management summarizes some of the “best practices” used around the country by communities like yours that have implemented property acquisition projects and converted acquired properties into open space as required by law. These “best practices” take into account multi-objective planning, the goal of which is to use open space to fulfill as many of a community’s objectives as possible. This phase comprises three chapters:

- ❑ **Chapter 1 — Open Space Use Questions & Answers.** Chapter 1 contains a basic discussion of open space and its contribution to a community.
- ❑ **Chapter 2 — Planning.** Chapter 2 leads you through basic planning activities. Planning how to use your newly acquired open space is the first step toward open space management.

- ❑ **Chapter 3 — Implementation & Long-term Management.** Chapter 3 offers guidance on:
 - Finding sources of funding and technical assistance to help you realize your open space vision
 - Implementing your open space plan
 - Managing your open space for the long-term
- ❑ Part 1 of the **Toolkit** contains the following tools:
 - Tool IV-1, Pros and Cons of Open Space Uses
 - Tool IV-2, National Park Service Directory
 - Tool IV-3, Workshop Checklist
 - Tool IV-4, Conducting Workshop Checklist
 - Tool IV-5, Workshop Facilitation Guide
 - Tool IV-6, Possible Sources of Technical and Financial Assistance
- ❑ Part 2 of the **Toolkit** contains the following reproducible form:
 - Form IV-1, Open Space Profile

CHAPTER 1 — OPEN SPACE USE QUESTIONS & ANSWERS

HOW MAY WE USE OUR OPEN SPACE?

For the most part, you can use your newly acquired open space however your community wants to use it, as long as you maintain it as open space. Examples include:

- ☐ Wetland restoration
- ☐ Greenway
- ☐ Recreational area for athletic fields, hunting and fishing areas, trails, etc.
- ☐ Campground (provided adequate warning and evacuation time exists)
- ☐ Community farm or garden
- ☐ Wildlife refuge
- ☐ Bird sanctuary
- ☐ Environmental and ecological education center

As you can see, your newly acquired open space can be used in many ways. Usually, you can combine uses. For example, you can restore property to wetlands and establish an educational center where people can learn about the impact of wetlands on the environment and ecosystem. You can establish a greenway with a trail that leads to an existing park or historic site. You can develop a recreational area complete with baseball and soccer fields and playgrounds. You can establish a campground complete with fishing areas, hiking trails, and canoeing. The possibilities are endless. Tool IV-1 identifies some basic open space uses, and the pros and cons of each.

Tool IV-1

After clearing the land, all subsequent costs incurred related to its use, or non-use, are the community's responsibility. Those costs are not part of project costs.

Good Idea

Title can be transferred to an eligible non-profit organization whose stated mission is conservation. A non-profit organization is eligible if the Internal Revenue Service recognizes it as a non-profit organization.

WHAT IS PROHIBITED ON OPEN SPACE?

Generally, “development” of any type is prohibited if it:

- ☐ Alters the area’s natural appearance (e.g., removes natural vegetation)
- ☐ Impedes the area’s ability to convey flood flows (including building fences that might trap debris)
- ☐ Reduces the area’s capacity to store floodwaters (e.g., paving)
- ☐ Increases downstream velocities
- ☐ Restricts access into and out of the area

In addition, commercial inventory storage (e.g., automobiles) and cemeteries are prohibited.

HOW CAN OPEN SPACE BENEFIT MY COMMUNITY?

- Open space can contribute to your community's economic well-being.

Property values tend to increase in areas adjacent to open space, which increases the tax base. In addition, statistics show that people are spending more money on recreational activities, which can lead to related jobs

and economic activity within your community. Tourism is a big business. Open space can draw people, and their dollars, into your community as well as provide rest, relaxation, and recreation for your own citizens. Also, open space can help reduce public expenditures because it usually requires few services and only low-level maintenance.

■ **Open space improves your community's environment and ecology.**

Open space offers a place where plants and animals can thrive, including threatened and endangered species. Its vegetation helps control pollution and erosion. It improves the quality of your community's air and water.

■ **Open space improves your community's quality of life.**

By controlling pollution and providing recreational activities, open space contributes to the health and fitness of your community's citizens. By being aesthetically pleasing, it contributes to their mental and emotional well-being, all of which contribute to quality of life. A high quality of life can contribute to your community's economic well-being. Studies indicate that quality of life is a top criterion for businesses looking for a place to settle. Furthermore, a healthier population can reduce public and private health care and insurance costs.

■ **Open space furthers your hazard mitigation goals and objectives.**

Open space increases your community's floodwater storage capacity and slows overland drainage. It also requires little or no search and rescue efforts during the next disaster. Also, by mitigating flood damages, your community might earn a higher Community Rating System (CRS) rating and pay lower National Flood Insurance Program (NFIP) premiums. Consequently, as a mitigation measure, creating open space benefits your entire community, not just the owners who sold their properties.

From Worst to Best: Tulsa, OK and the Tangible Benefits of Open Space¹

Tulsa, Oklahoma is located on the banks of the Arkansas River and is home to many creeks and tributaries that flow into the Arkansas River and nearby Verdigris River. It also is located in “Tornado Alley” and is regularly subject to high-intensity, often violent, storms with little warning.

Earliest flood records for Tulsa date back to the early 1900s and show patterns of repetitive flooding and development of flood control measures. Tulsa continued to grow nevertheless. However, it was stuck in a cycle of response, recovery, and reconstruction. By the early 1980s, Tulsa County had had nine federal disaster declarations in 15 years.

Then, in 1984, more than one foot of rain fell. As a result, 14 people were killed and 288 were injured. Damages totaled more than \$180 million. After watching its citizens endangered and struggling to rebuild over and over again, Tulsa’s leadership and residents decided they had had enough and Tulsa’s hazard mitigation projects began in earnest. Tulsa assembled a Flood Hazard Mitigation Team and created a unified program to acquire property and remove people from harm’s way, and enact flood control and storm water drainage measures.

Since the 1970s, Tulsa has cleared more than 900 buildings from its floodplain, with the largest single acquisition (300 single-family homes and 228 mobile-home pads) occurring after the 1984 flood. It has used its acquired open space to create recreational opportunities, improve fish and wildlife habitats, and enhance water quality, as well as help control the inevitable floodwaters.

For example, Tulsa has created detention sites containing permanent lakes that provide recreation, fish and wildlife habitat, aquifer recharge, and wetland restoration; and serve as filtering mechanisms to improve stormwater quality. A “trickle-trail” channel carries low-flow trickle, yet serves as a hiking, jogging, and cycling path when not carrying water. Tulsa also is working to preserve the last 17 acres of bottomland hardwood in the Mingo Creek basin; reforest 5,280 new trees in and around detention sites; and develop soccer, baseball, and football fields and picnic shelters. Consequently, Tulsa residents enjoy a variety of

recreational opportunities and, most important, a sense of security. But, the benefits Tulsa reaps do not stop there.

Twice, the Association of State Floodplain Managers has awarded Tulsa its top awards. FEMA has awarded Tulsa its Outstanding Public Service Award for its “significant contributions and distinguished leadership” in floodplain management. And, Tulsa has received the nation’s highest rating in NFIP’s CRS, which means Tulsa’s residents pay the lowest insurance rates in the country.

Tulsa has transformed itself from a community known for its disasters to a community known for its leadership in hazard mitigation and citizen-based planning, and its high quality of life.

¹ Adapted from *From Harm’s Way/Flood-hazard Mitigation in Tulsa, Oklahoma*, December 1993 & *From Rooftop to River/Tulsa’s Approach to Floodplain and Stormwater Management*, May 1994, both published under the auspices of the City of Tulsa Public Works Department

CHAPTER 2 — PLANNING

Good Idea

Before you do anything, contact a representative from the Rivers, Trails, and Conservation Assistance (RTCA) Program of the National Park Service (NPS). Since the devastating Midwest floods of 1993, RTCA has been an invaluable partner of communities developing and implementing open space plans. See Tool IV-2 for a list of the NPS's headquarters and regional offices.

Tool IV-2

IDENTIFY OPEN SPACE WORKGROUP

■ Who should be in my workgroup?

In Phase I, we identified the characteristics of a good project team leader and members. Those same characteristics apply to your open space workgroup.

Your workgroup should be citizen-based, comprise a broad range of expertise, and represent local interests. Specifically, assemble a workgroup whose members represent local government, owners of properties adjacent to the open space, local businesses and developers, community service and civic organizations, local conservation and environmental groups, etc.

■ What does my workgroup do?

Your workgroup provides project leadership; it might be a planning team, steering committee, etc. It also coordinates all planning activities



Form IV-1

and finalizes the Open Space Concept Plan. In addition, your workgroup creates an open space profile by researching the following. (Use Form IV-1 to capture your research.)

- ☐ The buyout area. Use information from your Hazard Mitigation Project Strategy (Phase I) and Application (Phase II), and from site visits to describe the buyout area. If your community has more than one buyout area, describe each individually. Specifically, describe:
 - Natural features. Include its location, size, topography, vegetation (native and landscaped), soil, etc.
 - Historic, archeological, and cultural features and their significance to the community. Also, identify historic structures relocated outside the area and their new location.
 - Existing infrastructure. Identify services provided by the community and infrastructure that might still be in place (e.g., sewer and water lines, utilities, street lights, roads, sidewalks, stormwater drains, etc.).
 - Existing improvements. Identify neighborhood improvements such as playgrounds, basketball and volleyball courts, etc.
- ☐ Areas adjacent to the buyout area. Describe the areas surrounding the buyout area, and how they all interrelate. Answer questions such as these: Are the surrounding areas primarily residential, business, or recreational? How close are the nearest populations? Who comprises the populations? (Answer this question in vague terms: elderly, families with children, etc. Knowing who lives nearby might affect possible uses.) How are the areas connected (e.g., roads, sidewalks, woods, etc.)?
- ☐ Existing facilities and programs within the community. Identify and describe the historic, recreational, cultural, etc. programs offered within your community. Include State and Federal programs (such as parks) as well. Identify their locations relative to the buyout area. (For example, State Park is located one-mile northwest of the buyout area, and is accessible to buyout area via Maple Avenue. Undeveloped private property separates the park and buyout area).

- ❑ Facilities and programs under development within the community. Identify and describe historic, recreational, cultural, etc. programs being considered within your community or currently developed by local, State, or Federal agencies or private organizations (such as conservation or environment groups). Identify their proposed locations relative to the buyout area.
- ❑ Local floodplain regulations and policies and land-use plans. These regulations, policies, and plans identify local goals and objectives, guidelines, restrictions, etc. Local regulations and policies also reflect State regulations and policies. Your open space use must meet local and State as well as Federal requirements.

■ How does my workgroup use that information?

Your open space profile creates the framework for your open space concept plan. You have a good picture of the buyout area as it is now, as well as enough information to begin visualizing how it might be in the future. From this point forward, your planning takes place within the context of this framework.

■ Obviously, my workgroup is ready to start planning. What now?

Your workgroup does not conduct planning. Your community does. Your newly acquired open space is public land. Therefore, the public should have input into how to use it. Without the support of your community, your open space plan and the long-term management of your open space is likely to fail. The best way to gain the community's support is to get the community involved.

■ Does my workgroup's job end here?

No, your workgroup still has plenty to do. It organizes and facilitates your community's involvement, and coordinates your community's ideas into a single open space concept plan.

INVOLVE COMMUNITY



■ Prepare for town meeting

Use a town meeting, or a series of town meetings, to get the community involved in open space planning. The town meeting conducted during this phase is really a workshop and, therefore, its preparation and conduct is a little different than the other town meetings you have held.

Purpose

The purpose of the town meeting is to solicit and document ideas from the public on how to use the open space created by your property acquisition project.

Materials

In addition to your plan framework, prepare a base map of the community that highlights the buyout area(s), adjacent area(s), and existing and proposed facilities and programs. State or local planning or RTCA staff might be able to help you do this.

Tools IV-3 & IV-4

Use Tool IV-3, Workshop Checklist, and Tool IV-4, Conducting Workshop Checklist, to help you prepare.

■ Conduct town meeting

Tool IV-5

Unlike the previous town meetings, participants of a workshop have a more active role than the facilitator(s) and speaker(s). Use Tool IV-5, Facilitation Guide, to guide you through the conduct of the workshop. More than one workshop might be necessary, in which case, modify the guide for any subsequent meeting(s). Hold as many meetings as necessary to refine ideas until those ideas reflect a community consensus. (At a minimum, hold another meeting to present the concept plan. See next section.)

How One Community Did It: The City of Audubon, Iowa

The Audubon Floodplain Open Space Steering Committee finalized Audubon's Open Space Concept Plan in November of 1995 with help from RTCA, FEMA, the Iowa Emergency Management Division, and, most important, community residents. The committee sponsored three workshops to involve residents in the planning process. State and FEMA Floodplain Management Program representatives also attended the workshops.

Workshop 1: The first workshop's purpose was to identify potential open space uses for the buyout area. The thirty-eight residents who attended were divided into smaller groups of 12 to 14 people each. Each group listed its ideas for using the space and sketched those ideas onto base maps.

Workshop 2: The second workshop was held the next month. Its purpose was to evaluate the ideas proposed during the first workshop and consolidate them into one overall concept. The twenty people who attended reached consensus on these uses: trails, habitat and stream restoration, an environmental education area and outdoor classroom, creek access areas, recreational facilities, and community gardens. An NPS landscape architect worked with them to draft a conceptual map.

The steering committee then evaluated the ideas to determine if they were technically feasible and ensure they complied with deed restrictions and floodplain regulations. Local natural resource agency staff and biology, ecology, and soil science experts helped them determine technical feasibility. Using the working group's map and the technical evaluations, the committee created Audubon's open space concept map.

Workshop 3: The third workshop was held three months after the second. This workshop's purpose was to update the residents and discuss the concept map. The community endorsed the proposed uses, with minor revisions, and selected a demonstration project.

The committee then presented the concept map to the city council, which unanimously endorsed it.

How Another Community Did It: City of Cherokee, Iowa

In addition to its community workshops, the city of Cherokee involved students from the school system's Talented and Gifted (TAG) program. Students in grades five through eight studied floodplain use and developed models for using the open space created by the property acquisition project. They presented their models at the first community workshop. Their ideas were incorporated into Cherokee's final Green Spaces Plan (concept plan).



PREPARE OPEN SPACE CONCEPT PLAN

Your Open Space Concept Plan reflects the workshop participants' consensus of ideas. The concept plan develops those ideas in more detail and is the blueprint for making those ideas realities.

■ Creating your concept plan

- ❑ Summarize your open space profile. Since your open space profile creates the framework for your Open Space Concept Plan, summarizing it sets the stage for your community's ideas.
- ❑ Summarize your community's ideas. Describe the open space facilities and programs that the citizens favor. Include citizens' ideas for:
 - Placing facilities and programs within the buyout area
 - Integrating those ideas with adjacent areas and facilities and programs within the community
 - Using existing infrastructure
 - Providing amenities

- Accessibility (e.g., vehicular and pedestrian traffic to, from, and throughout the area; addressing special needs, such as those of persons with disabilities and the elderly; etc.)
 - Restoring vegetation
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- ❑ Evaluate feasibility of implementing ideas. Ask local, State, or regional experts (e.g., engineering, planning, recreation, fish and wildlife, etc.) to determine if the ideas are technical feasible. If experts determine the ideas are not feasible, ask them to suggest ways for making the ideas feasible if possible.
 - ❑ Evaluate ideas to ensure they are compatible with the deed restrictions and easement restrictions. Contact your SHMO if you have any questions.
 - ❑ Modify ideas to include only those that are technically feasible. Also, identify those that might be made technically feasible and explain how.
 - ❑ Evaluate public safety issues. Ask police and fire officials to identify possible safety concerns and solutions to those concerns. Ask a town or county attorney to identify liability issues and ways to address those issues. Incorporate public safety experts' opinions into the plan.
 - ❑ Evaluate positive and negative impacts to natural and cultural resources and avoid any adverse impacts.
 - ❑ Develop implementation plan. Determine the logical order for implementing ideas and estimate the amount of time necessary for implementing each (e.g., trail construction, six weeks). Identify specific, individual implementation activities to fulfill ideas (e.g., trail construction might involve clearing overgrowth through wooded areas and grading). Address technical and public safety issues as necessary. Estimate an implementation schedule. Ensure plan complies with local, State and Federal regulations and policies.
 - ❑ Draft budget. Estimate the cost of completing each implementation activity within the estimated amount of time. For each activity, estimate labor, material, supervision, management, and overhead costs. Total the costs. Identify possible cost offsets, such as using donated

services or unskilled volunteer labor. Identify equipment, material, or supplies belonging to the community that might be available to offset costs. Determine activities that can be performed as part of current regional, county, or community employees' responsibilities. Note any assumptions that might affect the budget.

- ❑ Create concept map. Using your original base map, develop a concept map. Show each open space facility and program within the buyout area, as well as integration with each adjacent area (e.g., a tree line along the boundary between them) and other community facilities and programs (e.g., a greenway between the buyout area and a State park). Also, show access to and from the open space, parking, etc.
- ❑ Establish hours of operation. Determine times of year facilities and programs will be open and restrictions (e.g., trails may be used for biking in the summer months and cross-country skiing in the winter months, baseball diamonds are open in the spring and summer months, no pets allowed, etc.). Determine the times of day facilities and programs will be open (e.g., dawn to dusk, 9 a.m. to 9 p.m., etc.).
- ❑ Determine signage. Identify necessary postings, such as:
 - Hours of operations
 - Educational and interpretative information (e.g., identifying vegetation, historical significance, trails, etc.)
 - Acknowledgments (e.g., contributions of money and service)

Also, consider the size, appearance, and placement of signs

■ Presenting your concept plan

Hold a final town meeting to present the concept plan and budget to the public. Explain the overall process you used, describing all previous town meetings, and the development and evaluation of ideas. Display and discuss the concept map. Solicit feedback. Carefully consider any revisions suggested by attendees and, to the extent possible, revise the plan.

Finally, present the plan and budget to community decision-makers (e.g., city or town council, board of supervisors, etc.). Be sure to explain your process, stressing that the plan is citizen-based. Determine how much money your community can provide towards implementing the plan.

Once your plan is approved, put it into action.

CHAPTER 3 — IMPLEMENTATION & LONG-TERM MANAGEMENT

Putting your plan into action probably requires a change in leadership, from your open space workgroup to the entity that will have long-term responsibility for the property. Usually, this is a local parks and recreation department or similar entity. Putting your plan into action also requires identifying and gathering sources of financial and technical assistance to enable you to actually implement your plan.



OBTAIN FUNDING

Your community might not be able to fund your entire implementation budget, in which case funds from private organizations and State and Federal agencies might be available in the form of grants, loans, and donations to make up for the shortfall. To determine possible sources of funding, approach:

- ☐ Civic, service, conservation, recreation, and environmental organizations and groups in your community and State
- ☐ Businesses within and near your community, especially those that employ large percentages of the population
- ☐ State and Federal conservation and environmental agencies
- ☐ Groups, organizations, and agencies sponsoring similar facilities, programs, and initiatives within your community (refer to your profile), especially sponsors of those that can be integrated with your open space

Consider also services and materials that can be donated, thus eliminating the need for money to pay for them. Businesses, civic and professional organizations, houses of worship, youth groups, etc. that cannot provide funds might be able to donate equipment or materials, organize volunteers, or provide refreshments for volunteer workers. (For example,

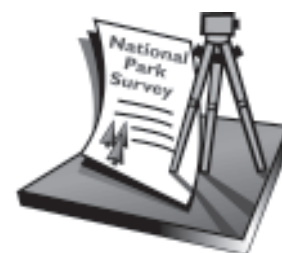
hold a volunteer workday on a Saturday and ask major employers to provide materials, a neighborhood church to prepare a picnic lunch, the Women's Club to prepare desserts, and the Elks to supply beverages.)

OBTAIN TECHNICAL ASSISTANCE RESOURCES

Building a public restroom or picnic shelter, developing a trail or baseball diamond, planting trees . . . all of the possible uses of your open space probably require some degree of input from experts. That input might simply be in the form of advice and guidance, or actual performance of a task.

Some assistance might come from local, regional, State, and Federal employees as part of their normal roles and responsibilities. Search for assistance that is outside the realm of public service as you would for funds. Consider assistance that can be donated or provided by one of your volunteers (e.g., a company willing to donate construction services or a scoutmaster who is a carpenter and can lead the effort to build picnic shelters). In addition to the sources identified in the above section, approach colleges and universities, vocational and trade schools, and professional organizations for technical assistance.

Tool IV-6, Possible Sources of Financial and Technical Assistance, identifies just a few private organizations and public agencies that might be able to provide assistance. That list is by no means all-inclusive, but it is a starting point.



Tool IV-6

IMPLEMENT YOUR OPEN SPACE PLAN

Refine your implementation schedule and budget to reflect any modifications you have made to your implementation plan resulting from your last town meeting or presentation before the decision-makers, and any funding and technical assistance you have received, expect to receive, or need to pursue. With your final plan in hand, you are ready to turn your buyout area into a valuable community resource.



Generally, implementation requires some degree of:

- ☐ Coordination among the various public agencies, private organizations, businesses, volunteers, etc., and coordination with community safety and permitting agencies
- ☐ Oversight of facility design and development and habitat restoration
- ☐ Fundraising and grant application development
- ☐ Outreach to recruit and maintain volunteers
- ☐ Communication to report progress to both the decision-makers and public
- ☐ Community involvement to maintain enthusiasm and support, and encourage volunteerism



MANAGE & MAINTAIN OPEN SPACE PROPERTY

Long-term management of your open space property begins with a management plan. In your management plan, address at least these three major areas:

- ☐ **Maintenance.** Maintenance depends on the area. For example, wetlands require little or no maintenance, picnic areas require routine trash collection and mowing, restrooms require routine cleaning and re-supply, trails require routine upkeep, and athletic fields require preparation before each season and periodic maintenance throughout the season. Maintenance also addresses such issues as cleanup and debris removal after a flood. Include maintenance schedules for each area. Consider seasonal differences (e.g., trash collection might be required less often during weekdays and fall and winter months than during weekends and spring and summer months).
- ☐ **Budget.** Because your open space is public property, its management becomes part of your community budget. Oversight and maintenance are the biggest budget items.

- ❑ Responsibility. Designate responsibility for each management and maintenance activity. To minimize public expenditure, consider private sponsorship of areas or fee collection. For example, encourage businesses to “adopt” trails or sections of trails for which they assume maintenance responsibility, partner with scout troops to periodically maintain and clean up designated areas to satisfy badge requirements, charge teams fees to contribute to the upkeep of athletic fields, etc.

After you have completed your management plan and received any necessary approval for it, implement your management plan. Ensure everyone who has responsibility for a management and maintenance activity fully understands that responsibility, and the schedule and budget associated with it.

Now, enjoy your open space and the benefits it provides!